

In the Claims:

1.(original) A communication cable comprising:

a transmitting connector;

a receiving connector;

an elongated flexible conductor integrated between said transmitting connector and said receiving connector, said elongated conductor including a fiber assembly comprising at least one optical fiber and a wire assembly comprising at least one metallic wire, said metallic wire to conduct electrical power, said optical fiber to conduct light pulses; and

said transmitting connector including a first light emitting device connected to said optical fiber, said first light emitting device to receive an electrical signal and then convert said electrical signal into a corresponding light signal which is transmitted through said optical fiber to be reconverted back into an electrical signal by a first light receiving device at said receiving connector.

2.(original) The communication cable as defined in Claim 1 wherein:

said transmitting connector includes a first flexible printed circuit board, said receiving connector including a second flexible printed circuit board.

3.(original) The communication cable as defined in Claim 1 wherein:

said wire assembly comprising a plurality of spaced apart wires, said fiber assembly including a plurality of spaced apart optical fibers.

4.(original) The communication cable as defined in Claim 1 wherein:

said optical fiber being fixedly mounted within both said transmitting connector and said receiving connector whereby said cable can incur abuse in a harsh environment and not break or become inoperative and still be able to operate, said optical fiber being fixedly mounted by being mounted alongside a high tensile strength elongated member.

5.(original) The communication cable as defined in Claim 1 wherein:

said transmitting connector also including a second light receiving device, said receiving connector including a second light emitting device, said second light emitting device being connected through said fiber assembly to said second light receiving device.

6.(original) A connector for a communication cable comprising:

a housing;

a light pulse receiver mounted within said housing, said light pulse receiver being connected to a flexible printed circuit board, said flexible printed circuit board being mounted within said housing;

a light source connected to said housing, said light source to supply a light pulse to said light pulse receiver; and

an electrical signal output connector connected to said printed circuit board, said electrical signal output connector adapted to receive an electrical signal from said printed circuit board and transmit same to an external piece of equipment.

7.(original) The connector as defined in Claim 6 wherein:

said light source comprises a flexible cable.

8.(original) The connector as defined in Claim 7 wherein:

said cable includes a plurality of separate optical fibers and a plurality of separate electrical conducting wires.

9.(original) The connector as defined in Claim 8 wherein:

said cable being fixedly mounted to said housing so said light source is not capable of any movement relative to said housing which would result in non-transmission of said light pulse to said light pulse receiver.

10.(original) The connector as defined in Claim 6 wherein:

said housing also including a light pulse emitter.

11.(currently amended) A connector for a communication cable comprising:

[[a]] an adapter housing on which is mounted a first connector housing;

a light pulse emitter mounted within said adapter housing, said light pulse emitter being connected to a flexible printed circuit board, said flexible printed circuit board being mounted within said housing; and

a light pulse receiver connected to said housing, said light pulse receiver to receive a light pulse from said light pulse emitter and transmit same to an output path located exteriorly of said adapter, said output path including a second connector housing, said first connector housing for transmitting a first electrical signal to said light pulse emitter, said second connector housing to receive a second electrical signal from said light pulse receiver, said second electrical signal being a substantial duplicate of said first electrical signal housing.

12.(currently amended) The connector as defined in Claim 11 wherein:
said output path ~~comprising~~ including a flexible, elongated conductor.

13.(currently amended) A connector for a communication cable comprising:
a housing;
a light pulse emitter mounted within said housing, said light pulse emitter being
connected to a flexible printed circuit board, said flexible printed circuit board being mounted
within said housing;
a light pulse receiver connected to said housing, said light pulse receiver to
receive a light pulse from said light pulse emitter and transmit same to an output path located
exteriorly of said housing;
said output path comprising a flexible, elongated conductor; and

~~The connector as defined in Claim 12 wherein:~~

said conductor is formed of a plurality of spaced apart optical fibers and a
plurality of spaced apart electrical conducting wires.

14.(original) The connector as defined in Claim 13 wherein:
said optical fibers being fixedly mounted to said housing so said light pulse
emitter is not capable of any movement relative to said housing which would result in non-
transmission of said light pulse to said output path.

Amendment to COMMUNICATION CABLE

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Claims 15-17(canceled)